Integration Guide
For SAP Integrated Business Planning 4.0 and SAP HANA Cloud Platform, Integration Service
Document History

⚠️ Caution
Before you start the implementation, make sure you have the latest version of this document. You can find the latest version at the following location: help.sap.com/ibp40

The following table provides an overview of the most important document changes.

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2015-03-16</td>
<td>Initial version</td>
</tr>
<tr>
<td>1.1</td>
<td>2015-07-23</td>
<td>IBP_KF_DemandPlanning task description enhanced</td>
</tr>
<tr>
<td>1.2</td>
<td>2016-06-06</td>
<td>SAP HANA Cloud Integration (HCI) has been renamed to SAP HANA Cloud Platform, integration service.</td>
</tr>
</tbody>
</table>
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1  About the Templates

Templates for SAP Integrated Business Planning in SAP HANA Cloud Platform, integration service provide predefined content which serves as the starting point for populating your SAP Integrated Business Planning applications.

### Note

SAP HANA Cloud Platform, integration service was previously called SAP HANA Cloud Integration (HCI). You might still find the old name at some places.

The templates are designed to meet the specific requirements of SAP Integrated Business Planning data, and reduce the time needed to get up and running with the application.

Three types of templates are available in SAP HANA Cloud Platform, integration service:

- General purpose templates
- Master data templates
- Key figure templates

General purpose templates contain information required by SAP Integrated Business Planning to process the data after it is loaded. The general purpose templates, `SOP_APO_Task` and `SOP_ECC_Task`, contain global variables, preload scripts and postload scripts. After using either of these templates to create a task, you add datastore information and your own data flows.

Tasks created from the master data templates and key figure templates contain the data flows, global variables, and scripts necessary to do the following:

- Tasks that transfer data from an SAP application to SAP Integrated Business Planning:
  - Extract data from SAP applications sources (SAP ERP and SAP APO)
  - Transform it as required for SAP Integrated Business Planning
  - Load the data to predefined target tables for the default model in the staging area of the SAP HANA application cloud

### Note

SAP Advanced Planning and Optimization can be deployed as part of an SAP Supply Chain Management (SAP SCM) installation, and as an add-on to SAP ERP. Therefore, when systems are mentioned, SAP APO/SAP SCM system refers to the system in which the SAP APO application is running.

**Task Elements**

Each task contains the elements described in the following table:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source datastore</td>
<td>Connects SAP HANA Cloud Platform, integration service and the source system, such as SAP ERP</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Target datastore</td>
<td>Connects SAP HANA Cloud Platform, integration service and the target system, such as SAP Integrated Business Planning</td>
</tr>
<tr>
<td>Target table</td>
<td>Target table of the data load process</td>
</tr>
<tr>
<td>Data flow</td>
<td>Defines the movement and transformation of data from source to target. A data flow may combine data from several source tables or extractors, but it has exactly one target table.</td>
</tr>
<tr>
<td>Global variables</td>
<td>Global variables allow you to parameterize a task for execution without changing its definition. Typical examples of global variables are selection parameters.</td>
</tr>
<tr>
<td>Preload script</td>
<td>Initializes global variables required for task run</td>
</tr>
<tr>
<td>Postload script</td>
<td>Records the timestamp of the most recent run</td>
</tr>
</tbody>
</table>

### Advantages of Using Templates

Each SAP Integrated Business Planning implementation is unique, therefore you are likely to customize the out-of-the-box tasks and data flows that you create from the SAP Integrated Business Planning templates. However, using the templates to create tasks and data flows as a starting point has the following advantages over creating tasks from scratch:

- Template tasks provide the framework and thus reduce the integration development time.
- Template tasks contain the global variables required to successfully load and process data into SAP Integrated Business Planning.
- Preload scripts are configured with default values for these global variables and provide a framework. This eliminates the need to write preload scripts from scratch.
- Data flows in master data templates and key figure templates follow best practice design for optimal integration performance.
- Data flows in master data templates and in key figure templates contain mappings from SAP ERP and SAP SCM/SAP APO source systems, and include joins and predefined filters.

**Note**

To learn about known issues when using SAP HANA Cloud Platform, integration service with SAP Integrated Business Planning, see SAP Notes [1826078](https://support.sap.com/notes/1826078) and [2007254](https://support.sap.com/notes/2007254).
2 Templates for SAP Integrated Business Planning 4.0

Note
You may find more tasks in SAP HANA Cloud Platform, integration service than those listed in this guide. However, only the tasks listed in this guide are relevant for SAP Integrated Business Planning 4.0.

You can use the following tasks as templates when you develop your tasks to fit to the specific needs of your company:

Master Data Templates to Transfer Data to SAP Integrated Business Planning

These templates serve to transfer master data from the source system (SAP ERP or SAP APO) to SAP Integrated Business Planning for sales and operations.

You can load master data into SAP Integrated Business Planning both from SAP ERP and SAP APO. Make sure you import master data from the system that is the leading system for master data in your landscape.

Table 3

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Purpose</th>
<th>SAP Applications Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP_MD_LocationMaster</td>
<td>To transfer location master data</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_MD_ProductMaster</td>
<td>To transfer product master data</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_MD_LocationProd</td>
<td>To transfer location product master data</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_MD_CustomerMaster</td>
<td>To transfer customer master data</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_MD_Resource</td>
<td>To transfer resource master data</td>
<td>SAP APO</td>
</tr>
</tbody>
</table>

Key Figure Templates to Transfer Data to SAP Integrated Business Planning

These templates serve to transfer key figure values from the source system (SAP ERP or SAP APO) to SAP Integrated Business Planning for sales and operations.

Table 4

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Purpose</th>
<th>SAP Applications Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP_KF_Actuals</td>
<td>To transfer actuals key figure data from SAP ERP</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_KF_Inventory</td>
<td>To transfer inventory key figure data from SAP ERP</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>Task Name</td>
<td>Purpose</td>
<td>SAP Applications Source</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>SOP_KF_OpenOrders</td>
<td>To transfer open orders key figure data from SAP ERP</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_KF_SalesForecastPrice</td>
<td>To transfer sales forecast price key figure data from SAP ERP</td>
<td>SAP ERP</td>
</tr>
<tr>
<td>SOP_KF_CapacityLimit</td>
<td>To transfer capacity limit key figure data from SAP APO</td>
<td>SAP APO</td>
</tr>
<tr>
<td>SOP_KF_Consumption</td>
<td>To transfer capacity consumption key figure data from SAP APO</td>
<td>SAP APO</td>
</tr>
<tr>
<td>IBP_KF_DemandPlanning</td>
<td>To transfer demand planning key figures, such as consensus demand plan</td>
<td>SAP APO</td>
</tr>
</tbody>
</table>

### General Purpose Templates

The following templates contain information required by SAP Integrated Business Planning to process the data after it is loaded. The templates contain global variables, preload scripts, and postload scripts.

Table 5

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP_APO_Task</td>
<td>You can use this task to define your own data flows from scratch.</td>
</tr>
<tr>
<td>SOP_ECC_Task</td>
<td>You can use this task to define your own data flows from scratch.</td>
</tr>
<tr>
<td>SOP_File_Task</td>
<td>You can use this task to define your own data flows from scratch.</td>
</tr>
</tbody>
</table>

### 2.1 Master Data Templates

SAP delivers templates you can use as the starting point for creating your own tasks to transfer data between your SAP ERP, SAP APO or SAP SCM system and SAP Integrated Business Planning.

You must load master data prior to loading key figures.

If you load master data from SAP ERP, perform the tasks in the following order:

1. SOP_MD_LOCATIONMASTER
2. SOP_MD_PRODUCTMASTER
3. SOP_MD_LOCATIONPROD
4. SOP_MD_CUSTOMERMASTER
5. SOP_MD_RESOURCE
**SOP_MD_LocationMaster**

This is a task for extracting location master data from SAP ERP, and loading it to SAP Integrated Business Planning.

Source table is T001W, source extractor is 0PLANT_ATTR.

The task loads master data into the staging table of the SM1LOCATION master data type (SOPMD_STAG_SM1LOCATION).

**Prerequisites for Creating a Task Based on the SOP_MD_LocationMaster Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the location master data from SAP ERP. Select Use Template, and select SOP_MD_LocationMaster as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

**SOP_MD_ProductMaster**

This is a task for extracting product master data from SAP ERP, and loading it to SAP Integrated Business Planning.

Source extractor is 0MATERIAL_ATTR, source table is MAKT.

The task loads master data into the staging table of the SM1PRODUCT master data type (SOPMD_STAG_SM1PRODUCT).

**Prerequisites for Creating a Task Based on the SOP_MD_ProductMaster Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the product master data from SAP ERP. Select Use Template, and select SOP_MD_ProductMaster as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.
SOP_MD_LocationProd

This is a task for extracting location product master data from SAP ERP, and loading it to SAP Integrated Business Planning.

Source tables are MBEW, MARA, and MRC.

The task loads master data into the staging table of the SM1LOCATIONPRODUCT master data type (SOPMD_STAG_SM1LOCATIONPRODUCT).

Prerequisites for Creating a Task Based on the SOP_MD_LocationMaster Template

The source and target datastores must exist.

How to Use This Template?

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the location product master data from SAP ERP. Select Use Template, and select SOP_MD_LocationProd as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

SOP_MD_CustomerMaster

This is a task for extracting customer master data from SAP ERP, and loading it to SAP Integrated Business Planning.

Source extractor is 0CUSTOMER_ATTR, source tables are KNVP, and KNVH.

The task loads master data into the staging table of the SM1CUSTOMER master data type (SOPMD_STAG_SM1CUSTOMER).

Prerequisites for Creating a Task Based on the SOP_MD_CustomerMaster Template

The source and target datastores must exist.

How to Use This Template?

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the customer master data from SAP ERP. Select Use Template, and select SOP_MD_CustomerMaster as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.
SOP_MD_Resource

This is a task for extracting **resource** master data from SAP APO, and loading it to SAP Integrated Business Planning.

Source table is /SAPAPO/RES_HEAD.

The task loads master data into the staging table of the SM1RESOURCE master data type (SOPMD_STAG_SM1RESOURCE).

**Prerequisites for Creating a Task Based on the SOP_MD_Resource Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under **Projects**, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the resource master data from SAP ERP. Select **Use Template**, and select **SOP_MD_Resource** as template.
3. In your newly created task, select the data flow, and choose **Copy to New Target**. Enter a name for the data flow. Select the target table, and choose **Copy Data Flow**.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

2.2 Key Figure Templates

SAP delivers templates you can use as the starting point for creating your own tasks to transfer key figure data between your SAP ERP, SAP APO or SAP SCM system and SAP Integrated Business Planning. Make sure you load the necessary master data before you load the key figure data.

**SOP_KF_Actuals**

This is a task for extracting actuals or shipment history key figure data from SAP ERP, and loading it to SAP Integrated Business Planning for sales and operations.

Source extractor is 2LIS_12_VCTIM_SOP, source tables are VBRK, and VBRP. The task loads key figure data into the SOPDD_STAGING_KFTAB_SM1BASE staging table, into the SM1ACTUALSQTY and SM1ACTUALSREV key figure columns.

**Prerequisites for Creating a Task Based on the SOP_KF_Actuals Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under **Projects**, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the actuals or shipment history key figure data from SAP ERP. Select **Use Template**, and select **SOP_KF_Actuals** as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.

4. Modify your data flow, if needed, to specify the field mappings.

5. Review the default values of the global variables, and make changes as needed.

**SOP_KF_Inventory**

This is a task for extracting current inventory and inventory target key figure data from SAP ERP, and loading it to SAP Integrated Business Planning for sales and operations.

Source tables are MARC, MARA, and MARD. The task loads key figure data into the SOPDD_STAGING_KFTAB_SM1BASE staging table, into the SM1INITIALINVENTORYQTY and SM1INVENTORYTARGETQTY key figure columns.

**Prerequisites for Creating a Task Based on the SOP_KF_Inventory Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.

2. Create a task in your project to transfer the inventory key figure data from SAP ERP. Select Use Template, and select SOP_KF_Inventory as template.

3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.

4. Modify your data flow, if needed, to specify the field mappings.

5. Review the default values of the global variables, and make changes as needed.

**SOP_KF_OpenOrders**

This is a task for extracting open orders key figure data from SAP ERP, and loading it to SAP Integrated Business Planning for sales and operations.

Source extractors are 2LIS_11_VAHDR, 2LIS_11_VAITM, and 2LIS_11_VASTI.

The task loads key figure data into the SOPDD_STAGING_KFTAB_SM1BASE staging table, into the SM1INITIALINVENTORYQTY and SM1INVENTORYTARGETQTY key figure columns.

**Prerequisites for Creating a Task Based on the SOP_KF_OpenOrders Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.

2. Create a task in your project to transfer the open orders key figure data from SAP ERP. Select Use Template, and select SOP_KF_OpenOrders as template.

3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.

4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

**SOP_KF_SalesForecastPrice**

This is a task for extracting sales forecast price key figure data from SAP ERP, and loading it to SAP Integrated Business Planning for sales and operations.

Source extractor is 2LIS_13_VDITM.

The task loads key figure data into the SOPDD_STAGING_KFTAB_SM1BASE staging table, into the SM1SALESFORECASTPRICE key figure column.

**Prerequisites for Creating a Task Based on the SOP_KF_SalesForecastPrice Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the sales forecast price key figure data from SAP ERP. Select Use Template, and select SOP_KF_SalesForecastPrice as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

**SOP_KF_CapacityLimit**

This is a task for extracting capacity limit or available resource capacity key figure data from SAP APO, and loading it to SAP Integrated Business Planning for sales and operations.

Source table is /SAPAPO/RES_HEAD, source extractor is 9ACAPACITY.

The task loads key figure data into the SOPDD_STAGING_KFTAB_SM1BASE staging table, into the SM1CAPASUPPLY key figure column.

**Prerequisites for Creating a Task Based on the SOP_KF_CapacityLimit Template**

The source and target datastores must exist.

**How to Use This Template?**

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the capacity limit or available resource capacity key figure data from SAP ERP. Select Use Template, and select SOP_KF_CapacityLimit as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.
SOP_KF_Consumption

This is a task for extracting capacity consumption rate key figure data from SAP APO, and loading it to SAP Integrated Business Planning for sales and operations.

Source BAPI functions are `BAPI_LOCSRVAPS_GET_LIST2` and `BAPI_PDSSRVAPS_GETLIST`.

The task loads master data into the `SOPDD_STAGING_KFTAB_SM1BASE` staging table, into the `SM1CAPACONSUMPTION` key figure column.

Prerequisites for Creating a Task Based on the SOP_KF_Consumption Template

The source and target datastores must exist.

How to Use This Template?

1. Under Projects, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the capacity consumption rate key figure data from SAP ERP. Select Use Template, and select SOP_KF_Consumption as template.
3. In your newly created task, select the data flow, and choose Copy to New Target. Enter a name for the data flow. Select the target table, and choose Copy Data Flow.
4. Modify your data flow, if needed, to specify the field mappings.
5. Review the default values of the global variables, and make changes as needed.

IBP_KF_DemandPlanning

The IBP_KF_DemandPlanning template contains a data flow to extract demand planning-related key figure data, such as the consensus demand plan data, from SAP APO, and load it to SAP Integrated Business Planning for sales and operations.

Recommendation

When defining the data transfer, take the following recommendations into consideration:

SAP recommends to transfer demand planning key figure data from SAP APO at product-location-customer level. In case the customer characteristic is not available for the key figure data in the source system, either use a similar characteristic, such as the customer group, or assign a constant value to the customer in SAP HANA Cloud Platform, integration service.

The template uses weeks as periods, which is the recommended period to use. You can also use months.

Prerequisites for Creating a Task Based on the IBP_KF_DemandPlanning Template

Defining and Releasing DataSources in SAP APO

In SAP APO, you have executed the following steps:

1. You have set up your planning area in SAP APO.
2. You have generated the necessary DataSources (in the `DP/SNP Data Extraction` (SAPAPO/SDP_EXTR) transaction).

   Generate a DataSource for each key figure that you want to upload from SAP APO. For performance reasons, consider using parallel processing. Specify a parallel processing profile to do so.
In your key figure DataSource, select product, location, customer, planning version, time period (weeks recommended), and the relevant key figure, such as consensus forecast. Make sure you have hidden all fields that you do not need to extract.

3. Replicate each DataSource without transporting it.
4. In the Data Warehousing Workbench, activate the DataSources.
5. Execute the `Release 9A DataSources for External Use (/SAPAPO/PAREA_EXTR_EXPOSE)` report to release your DataSources for external use, that is, to make them available for SAP HANA Cloud Platform, integration service.

**Creating Datastores and Importing DataSources and Tables in SAP HANA Cloud Platform, Integration Service**

**Prerequisite:** SAP Data Services Agent is configured in your system landscape.

For more information about the SAP Data Services Agent, see the SAP Data Services Agent Guide on SAP Help Portal at help.sap.com/hci_ds.

1. In SAP HANA Cloud Platform, integration service, create a datastore that represents your SAP APO system. Provide the following data for the new datastore:

<table>
<thead>
<tr>
<th>Name and Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent</td>
<td>The SAP Data Services Agent in your landscape</td>
</tr>
<tr>
<td>System number and client number of your SAP APO / SAP SCM system</td>
<td></td>
</tr>
</tbody>
</table>

2. Import the DataSources that you have created in SAP APO. Select the datastore that represents your SAP APO / SAP SCM system, and choose `Import Object by Name`. Select `Extractors`, and enter the name of the DataSource in the `Name` field.

3. Create a datastore that represents your SAP Integrated Business Planning system. Provide the following data for the new datastore:

<table>
<thead>
<tr>
<th>Name and Description</th>
<th>Instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Integrated Business Planning</td>
</tr>
<tr>
<td>Instance</td>
<td>Your SAP Integrated Business Planning system</td>
</tr>
</tbody>
</table>

   **Note**
   If you cannot select your SAP Integrated Business Planning system as an instance, contact SAP.

4. Import the staging tables that will be used for importing key figure data:

   1. Select the datastore that represents your SAP Integrated Business Planning system, and choose `Import Objects`.
   2. Expand the `Timeseries folder` in the tree, and select the planning area from which you will import the data.
3. Expand the planning area, select the staging table, and choose **Import**.

**Note**

The name of the staging table is of the following pattern: `SAPMD_STAGING_KFTAB_<Planning Area Version><Planning Area Name>`.
Abbreviations may occur in the name of the table.
Make sure that you select only tables that match this naming convention.

**How to Use This Template?**

1. **Under Projects**, create your own project to group your data integration tasks, or select an existing project.
2. Create a task in your project to transfer the demand planning-related key figure data from your planning area in SAP APO. Select **Use Template**, and select **IBP_KF_DemandPlanning** as template.
3. As source datastore, select the datastore that represents your SAP APO / SAP SCM system. As target datastore, select the datastore that represents SAP Integrated Business Planning. Choose **Save** and **Define Data Flow**.

You can find the `SOPDD_STAGING_KFTAB_SAP6` target object (tables) and the related `DF_IBP_DemandPlanning` data flow under the task you have created.

4. If you want to transfer data from a different planning area than the one in the template, replace the target table of the data flow. To do this, select the data flow, and choose **Copy to new target**.
5. Enter a name for the data flow, and select the staging table of your planning area as target object. If you have not imported the staging table for your planning area to the datastore yet, you can also perform the import in this step. Select **Copy Data Flow or Import and Copy Data Flow**.
6. Open the data flow for editing by choosing **Actions > Edit**.

**Note**

In the note box of the data flow, you can find instructions about adjusting the data flow to fit your needs.
This document provides you with more detailed information about the required adjustments.

7. Replace the source table with your DataSource for the key figure (the DataSource you have generated and exposed in SAP APO).
8. Connect the source table to the **Read KeyFigure** step.
9. In the **Read KeyFigure** step, define the field mappings for calendar week, customer, product, location, and planning version.

Open the field mapping for `MATID`, and replace the `APO` string in lookup (`'APO./SAPAPO/MATKEY'`) with the name of your source datastore.

Replace the string `"9ADP_CUSTOM_TOTAL_DEMAND_PLAN"./BI0/9AMATNR` with the product ID field in your source table.
10. In the **Lookup_ConvFactors** step, open the mapping for the fields `NUMERATOR` and `DENOMINATOR`, and replace the `APO` string in lookup (`'APO./SAPAPO/MARM'`) with the name of your source datastore.
11. In the **MapToTarget** step, define the mappings for the key figures you want to transfer.
12. Make sure you have mapped the date and at least one key figure. In case you have mapped several key figures, they must refer to the same planning level. Check that you have mapped all key fields of the planning level.
13. Once you have adjusted each data flow to your needs, set the following global variables under Execution Properties:
   - $G\_PLANNING\_AREA
   - $G\_PLANNING\_UOM

14. Delete the template data flow and its associated target table from your task.
15. Choose Validate to check your task. If required, make the necessary corrections.

### Note
By default, the template uses weeks as periods. In case you want to use months, make the following adjustments:

1. Set up your DataSource in SAP APO to extract data at monthly level.
2. In the Read KeyFigure step in the dataflow of your task, add CALMONTH as an output field, and map it to the CALMONTH input field. Delete the CALWEEK field from the output structure.
3. In the Lookup_ConvFactors step, add CALMONTH as an output field, and map it to the CALMONTH input field. Delete the CALWEEK field from the output structure.
4. In the Calc KeyFigure step, add CALMONTH as an output field, and map it to the CALMONTH input field. Delete the CALWEEK field from the output structure.

   Select KEYFIGUREDATE, and edit the Mapping under Transform Details: Comment the # Transfer CALWEEKS section, and uncomment the # Transfer CALWEEKS section.

### Executing the Task
Make sure you have imported the necessary master data before you execute the task to load demand planning-related data into the demand or sales and operations application.

To execute a task, go to the Projects view, and choose Run Now. You can check the task run (view a log of errors and the number of records transferred) by selecting your task, and choosing View History.

After a thorough testing of your task, you may decide to schedule it for a periodic run. To do this, first promote your task to the production environment by selecting the task, and choosing More Actions → Promote. Then switch to the productive view. There, select your task, and choose Schedule, then New, and enter the required data.

### Note
Between SAP APO and SAP Integrated Business Planning, the data transfer is always a complete data transfer, not a delta transfer.

Deletions of characteristic value combinations in SAP APO’s Demand Planning cannot be transferred to SAP Integrated Business Planning.

### 2.3 General Purpose Templates

**SOP_APO_Task**

This template has APO as source datastore, and SOP as target datastore. The template includes the preload script and postload script, as well as default values for the global variables.
You can use this task to define your own data flows from scratch.

**SOP_ECC_Task**

This template has ECC as source datastore, and SOP as target datastore. The template includes the preload script and postload script, as well as default values for the global variables.
You can use this task to define your own data flows from scratch.

**SOP_File_Task**

This template has a file format group as source datastore, and SOP as target datastore. The template includes the preload script and postload script, as well as default values for the global variables.
You can use this task to define your own data flows from scratch.
3  Global Variables

Global variables are symbolic placeholders. When a task runs, these placeholders are populated with values. This allows users flexibility of run-time values used in extractions.

Note

Certain global variables are used by the SAP Integrated Business Planning applications to process the data after it is loaded. If these global variables are not included in the task, then data will be loaded, but SAP Integrated Business Planning cannot process it as expected. The required global variables are: $G_PLAN_AREA, $G_SCENARIO, $G_TIME_PROFILE, and $G_BATCH_COMMAND.

3.1  Setting Global Variables

Depending on your requirements and environment, allow the default values or set values in one of the following locations:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Now dialog box</td>
<td>Use for testing. From the Projects tab, select a task. From the Actions menu, choose Run Now.</td>
</tr>
<tr>
<td>Global Variables under Execution Properties tab of a task</td>
<td>Use for loading data. From the Projects tab, select a task. From the Actions menu, choose Edit. Click the Execution Properties tab.</td>
</tr>
<tr>
<td>Preload script</td>
<td>Use for testing and loading data. From the Projects tab, select a task. From the Actions menu, choose Edit. Click the Execution Properties tab, then the Preload tab under Scripts.</td>
</tr>
</tbody>
</table>

3.2  Shared Global Variables

Shared global variables are included in all SAP Integrated Business Planning data integration tasks. Most tasks contain additional unique global variables.

Global variables contain default values which are used if the value has not been changed. As needed, change the value of each global variable per your requirements and environment. Certain global variables are used by the SAP Integrated Business Planning applications to process the data after it is loaded. The default value and information about each of the shared global variables is shown in the following table:
<table>
<thead>
<tr>
<th>Required by SAP Integrated Business Planning</th>
<th>Global Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>Default Value for Master Data Task</th>
<th>Default Value for Key Figure Data Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>$G_PLAN_AREA</td>
<td>The planning area value is defined in SAP Integrated Business Planning, in the Configuration app. The value must contain only uppercase alphanumeric characters and begin with a letter. Spaces are not allowed.</td>
<td>varchar(50)</td>
<td>&quot;&quot;</td>
<td>'SAPMODEL1'</td>
</tr>
<tr>
<td>Yes</td>
<td>$G_SCENARIO</td>
<td>Indicates the base version</td>
<td>varchar(50)</td>
<td>&quot;&quot;</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>Yes</td>
<td>$G_TIME_PROFILE</td>
<td>The time profile ID is defined in SAP Integrated Business Planning, in the Configuration app.</td>
<td>int</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>Yes</td>
<td>$G_BATCH_COMMAND</td>
<td>Defines how SAP Integrated Business Planning processes the data loaded in the batch execution. Recognized values are: INSERT_UPDATE updates or adds new data to SAP Integrated Business Planning. DELETE removes the specified records from SAP Integrated Business Planning. REPLACE updates key figures that overlap with existing data in the system. The non-overlapping data is not changed.</td>
<td>varchar(50)</td>
<td>'INSERT_UPDATE'</td>
<td>'INSERT_UPDATE'</td>
</tr>
<tr>
<td>No</td>
<td>$G_LOAD_DATE</td>
<td>The load date of the task</td>
<td>datetime</td>
<td>Sysdate()</td>
<td>Sysdate()</td>
</tr>
<tr>
<td>No</td>
<td>$G_DEFAULT_TEXT</td>
<td>Default text for the dimension default rows, foreign keys, and primary keys. Also used as a default for missing descriptions.</td>
<td>varchar(1)</td>
<td>'?'</td>
<td>'?'</td>
</tr>
</tbody>
</table>
### 3.3 Unique Global Variables for Each Template

All SAP Integrated Business Planning data integration tasks contain shared global variables. Additionally, most tasks contain global variables which are unique to that task.

Global variables contain default values which are used if the value has not been changed. As needed, change the value of each global variable per your requirements and environment. The default value and information about each of the unique global variables is shown in the following table.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Global Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP_KF_Actuals</td>
<td>$G.Initial_OR_DELTA</td>
<td>Identifies whether a task is a first (initial) load or a delta load. Recognized values are 'INITIAL' and 'DELTA'.</td>
<td>varchar(7)</td>
<td>'INITIAL'</td>
</tr>
<tr>
<td></td>
<td>$G_DELTA_DAYS</td>
<td>Defines the number of days of data to extract. Default for initial load is 730 days. Default for delta load is 30 days. To change this value, edit the preload script.</td>
<td>integer</td>
<td>730 or 30</td>
</tr>
<tr>
<td></td>
<td>$G_SDATE</td>
<td>Starting date for actuals extraction. It is automatically calculated in the preload script as calculated in the preload script as</td>
<td>datetime</td>
<td>Calculated in the preload script</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required by SAP Integrated Business Planning</th>
<th>Global Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>Default Value for Master Data Task</th>
<th>Default Value for Key Figure Data Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>$G_DEFAULT_DATE</td>
<td>Default date for the dimension default rows, foreign keys, and primary keys. Also used as a default for missing dates.</td>
<td>datetime</td>
<td>'1900.01.01'</td>
<td>'1900.01.01'</td>
</tr>
<tr>
<td>Task Name</td>
<td>Global Variable</td>
<td>Description</td>
<td>Data Type</td>
<td>Default Value</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>SOP_KF_Consumption</strong></td>
<td>$G_LOGICAL_SYSYTEM</td>
<td>Logical system value required to call BAPI functions (BAPI_LOCSRVAPS_GETLIST2 and BAPI_PDSSRVAPS_GETLIST). Task returns no data if this value is not correct. Enter the right logical system name for your SAP applications system, following the pattern 'SYSCLNT001'.</td>
<td>varchar(255)</td>
<td>'APOCLNT800'</td>
<td></td>
</tr>
<tr>
<td><strong>SOP_MD_Customer Master</strong></td>
<td>$G_PARVW</td>
<td>Use the value defined by your business partner. Allows you to extract customer data for a single value of KNVP.PARVW. The default value in the template is 'AG' for sold-to-party.</td>
<td>varchar(255)</td>
<td>'AG'</td>
<td></td>
</tr>
<tr>
<td><strong>SOP_File_Task</strong></td>
<td>$G_FILE_NAME</td>
<td>Can be used to specify the name of the file that is loaded into SAP Integrated Business Planning. Set the value in the preload script.</td>
<td>varchar(100)</td>
<td>'FileName.csv'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_FILE_DIRECTORY</td>
<td>Can be used to specify the directory of the file that is loaded into SAP Integrated Business Planning. Set the value in the preload script.</td>
<td>varchar(100)</td>
<td>'C:\Directory'</td>
<td></td>
</tr>
<tr>
<td><strong>SOP_KF_Inventorie</strong></td>
<td>$G_MONTHS_FORECAST</td>
<td>Number of months in the current inventory</td>
<td>integer</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Task Name</td>
<td>Global Variable</td>
<td>Description</td>
<td>Data Type</td>
<td>Default Value</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>forecast. 0 is the current month. For example, 18 is 18 months in the future.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$G_MATERIAL_TYPE_1</td>
<td></td>
<td>Extracts inventory data from MARA.MTART for the specified material type</td>
<td>varchar(4)</td>
<td>'ROH'</td>
<td></td>
</tr>
<tr>
<td>$G_MATERIAL_TYPE_2</td>
<td></td>
<td></td>
<td>varchar(4)</td>
<td>'HALB'</td>
<td></td>
</tr>
<tr>
<td>$G_MATERIAL_TYPE_3</td>
<td></td>
<td></td>
<td>varchar(4)</td>
<td>'FERT'</td>
<td></td>
</tr>
<tr>
<td>$G_MATERIAL_TYPE_4</td>
<td></td>
<td></td>
<td>varchar(4)</td>
<td>'HIBE'</td>
<td></td>
</tr>
<tr>
<td>$G_MATERIAL_TYPE_5</td>
<td></td>
<td></td>
<td>varchar(4)</td>
<td>'FHMI'</td>
<td></td>
</tr>
<tr>
<td>SOP_MD_Location Master</td>
<td>$G_NODETYPE1</td>
<td>Extracts location data for the supply chain network from the specified nodes</td>
<td>varchar(3)</td>
<td>'DC'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_NODETYPE2</td>
<td></td>
<td>varchar(3)</td>
<td>'B'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_NODETYPE3</td>
<td></td>
<td>varchar(3)</td>
<td>No default value</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_NODETYPE4</td>
<td></td>
<td>varchar(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_NODETYPE5</td>
<td></td>
<td>varchar(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOP_MD_Location Prod</td>
<td>$G_MATERIAL_TYPE_1</td>
<td>Extracts inventory data from MARA.MTART for the specified material type</td>
<td>varchar(4)</td>
<td>'ROH'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_2</td>
<td></td>
<td>varchar(4)</td>
<td>'HALB'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_3</td>
<td></td>
<td>varchar(4)</td>
<td>'FERT'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_4</td>
<td></td>
<td>varchar(4)</td>
<td>'HIBE'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_5</td>
<td></td>
<td>varchar(4)</td>
<td>'FHMI'</td>
<td></td>
</tr>
<tr>
<td>SOP_MD_ProductM aster</td>
<td>$G_MATERIAL_TYPE_1</td>
<td>Extracts inventory data from MARA.MTART for the specified material type</td>
<td>varchar(4)</td>
<td>'ROH'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_2</td>
<td></td>
<td>varchar(4)</td>
<td>'HALB'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_3</td>
<td></td>
<td>varchar(4)</td>
<td>'FERT'</td>
<td></td>
</tr>
<tr>
<td>Task Name</td>
<td>Global Variable</td>
<td>Description</td>
<td>Data Type</td>
<td>Default Value</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------</td>
<td>-------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_4</td>
<td></td>
<td>varchar(4)</td>
<td>'HIBE'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MATERIAL_TYPE_5</td>
<td></td>
<td>varchar(4)</td>
<td>'FHMI'</td>
<td></td>
</tr>
<tr>
<td>SOP_KF_SalesForecastPrice</td>
<td>$G_DAYS_FORECAST</td>
<td>Number of days that the initial forecast values are based on</td>
<td>integer</td>
<td>183</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_MONTHS_FORECAST</td>
<td>Number of future months for which the current sales price will be forecast</td>
<td>integer</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>IBP_KF_DemandPlanning</td>
<td>$G_PLANNING_UOM</td>
<td>Planning unit of measure</td>
<td>varchar(3)</td>
<td>'ST'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_PERIOD_TYPE</td>
<td>Period type for time selection. Valid values are 'W' for weeks, and 'M' for months.</td>
<td>varchar(1)</td>
<td>'W'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_PLANNING_VERSION</td>
<td>Planning version in SAP APO</td>
<td>varchar(3)</td>
<td>'000'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_PERIODS_FUTURE</td>
<td>Number of periods to be transferred, including the current period</td>
<td>integer</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$G_PERIODS_PAST</td>
<td>Number of past periods to be transferred (such as -3)</td>
<td>integer</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
## 4 Related Documentation

Table 11

<table>
<thead>
<tr>
<th>Documentation</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help Center for SAP HANA Cloud Platform, integration service</td>
<td>Available from within the SAP HANA Cloud Platform, integration service Web application</td>
</tr>
<tr>
<td>SAP Data Services Agent Guide</td>
<td>help.sap.com/hci_ds</td>
</tr>
<tr>
<td>Creating and Configuring Service Providers and Service Consumers in SAP NetWeaver Library</td>
<td>SAP NetWeaver Library  &gt; Function-Oriented View for your SAP NetWeaver release at help.sap.com/nw</td>
</tr>
</tbody>
</table>
## Typographic Conventions

Table 12

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;Example&gt;</code></td>
<td>Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your <code>&lt;User Name&gt;</code>”.</td>
</tr>
<tr>
<td>Example</td>
<td>Arrows separating the parts of a navigation path, for example, menu options</td>
</tr>
<tr>
<td>Example</td>
<td>Emphasized words or expressions</td>
</tr>
<tr>
<td><strong><a href="http://www.sap.com">www.sap.com</a></strong></td>
<td>Textual cross-references to an internet address</td>
</tr>
<tr>
<td><code>/example</code></td>
<td>Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web</td>
</tr>
<tr>
<td>123456</td>
<td>Hyperlink to an SAP Note, for example, SAP Note 123456</td>
</tr>
</tbody>
</table>
| Example    | • Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options.  
            |     • Cross-references to other documentation or published works             |
| Example    | • Output on the screen following a user action, for example, messages       
            |     • Source code or syntax quoted directly from a program                  
            |     • File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools |
| EXAMPLE    | Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, `SELECT` and `INCLUDE` |
| EXAMPLE    | Keys on the keyboard                                                       |